

REMARKS

Claims 1-12 were pending in the application. Claim 1 has been amended to include the limitations of claims 7 and 8. Claims 7 and 8 are cancelled. New claims 13 and 14 have been introduced. Support for new claims 13 and 14 may be found, for example, on page, 5 line 29 through page 6, line 2 of the specification. No new matter has been added.

Claims Rejections 35 U.S.C. 112

Claim 1 is rejected by the Examiner under 35 U.S.C. 112, 2nd paragraph as being indefinite. The Examiner's rejection has been carefully considered. In response to the Examiner's rejection, Applicant has amended claim 1 to remove the term "in particular" in line 2 and to clarify that "it" recited in line 5 is "the locking element (20). Applicant believes that claim 1, as amended, overcomes the outstanding rejection and respectfully requests that the rejection be withdrawn.

Claims Rejections 35 U.S.C. 103

Claims 1-12 are rejected by the Examiner under 35 U.S.C. 103(a) as being unpatentable over Hoffmann (DE 10222292 A1) in view of Chen (US 6,905,401 B1). The Examiner's rejection has been carefully considered. Applicant has amended claims and believes that the claims, as amended, overcome the rejections under 35 U.S.C. 103(a) for the reasons that follow and respectfully requests that the rejection under 35 U.S.C. 103(a) be withdrawn.

Hoffmann teaches a tool holding device for an insert tool (14) with a disk-shaped hub (42), having a drive shaft (16) and a drive device (12) with at least one locking element (20), wherein the locking element (20) is supported so that the locking element (20) is able to move relative to a spring element (18) in order to fix the insert tool (14) in

a form-locked manner in the circumferential direction (50, 52) (see figure 2 and the specification in Hoffman).

The present invention comprises features not taught by Hoffmann. These features include at least one form-locking element (100) that is formed onto the drive shaft (16) in a non-cutting manner in order to connect the drive shaft (16) in a form-locked manner in the circumference direction (50, 52) to a drive torque-transmitting mechanism of the drive device (12). The mechanism of the drive device (12) comprises a drive flange (10) that constitutes a contact surface (30) for a surface of the insert tool (14), which is oriented on a machine tool side of the insert tool (14), and the mechanism of the drive device (12) is supported on the drive shaft (16) by means of a spacer element (108) (see FIG. 2; page 5, lines 14-19; and page 6, lines 4-8 in the present specification).

Hoffmann does not teach or suggest a form locking element. Consequently, claim 1, as amended, is patentable over Hoffmann.

Chen teaches a pneumatic grinding tool that is able to rotate in a bidirectional manner. To facilitate the rotation of a grinding member (4), the tool comprises a transmission axle (30) with a spline section (300). The spline section (300) communicates with a stepwise coupling section (310) with a first spline trough (311) of a coupling member (31). The tool-oriented side of the coupling member (31) has a specialized shaped to maintain a proper coupling between the coupling element (31) and the transmission axle (30) (see figure 3 and the specification in Chen).

Contrary to Chen, the present invention discloses the arrangement of a spacer element (108) between the drive shaft (16) and the drive device (12) or the drive flange (10), respectively, which bridges over a manufacture-induced transition (132) between a region at the free end of the drive shaft (16) and a region adjoining the form-locking element (100) in an axial direction (64). Due to the placement of the spacer element (108), it is not necessary to provide the mechanism of the drive device (12) or the drive

flange (10) with an expensive contour corresponding to the transition (132) (FIG. 2 and page 4, lines 19-24 in the present specification). Consequently, the present invention provides for lower manufacturing costs than the invention taught by Chen.

Chen does not teach or suggest a spacer element as recited in present claim 1 to provide a structure that reduces the cost of parts and manufacturing. Rather, Chen teaches a coupling element having a specialized shape that is complementary to the shape of a region in which the transmission axle is arranged (see figure 3 in Chen).

A person skilled in the art would have no motivation, at the time that the invention was made, to combine the tool holding device for an insert tool taught by Hoffmann with the pneumatic grinding tool able to rotate in a bidirectional manner taught by Chen to arrive at the presently claimed invention.

Conclusion

The application in its amended state is believed to be in condition for allowance. Action to this end is courteously solicited. Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully submitted,



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